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HOUSE BILL NO. 2862**FLOOR AMENDMENT IN THE NATURE OF A SUBSTITUTE**(Proposed by Delegate Bryant
on February 8, 2005)

(Patron Prior to Substitute—Delegate Bryant)

A *BILL* to amend the Code of Virginia by adding in Chapter 3.1 of Title 62.1 an article numbered 4.02, consisting of sections numbered 62.1-44.19:12 through 62.1-44.19:19, relating to the establishment of a nutrient credit exchange program.

Be it enacted by the General Assembly of Virginia:

1. That the Code of Virginia is amended by adding in Chapter 3.1 of Title 62.1 an article numbered 4.02, consisting of sections numbered 62.1-44.19:12 through 62.1-44.19:19, as follows:

Article 4.02.

Chesapeake Bay Watershed Nutrient Credit Exchange Program.

§ 62.1-44.19:12. Legislative findings and purposes.

The 2000 Chesapeake Bay Agreement and related multistate cooperative and regulatory initiatives (i) establish allocations for nitrogen and phosphorus delivered to the Chesapeake Bay and its tidal tributaries to meet applicable water quality standards and (ii) place caps on the loads of these nutrients that may be discharged into the Chesapeake Bay watershed. These initiatives will require public and private point source dischargers of nitrogen and phosphorus to achieve significant additional reductions of these nutrients to meet the cap load allocations. The General Assembly finds and determines that adoption and utilization of a watershed general permit and market-based point source nutrient credit trading program will assist in (a) meeting these cap load allocations cost-effectively and as soon as possible in keeping with the 2010 timeline and objectives of the Chesapeake 2000 agreement, (b) accommodating continued growth and economic development in the Chesapeake Bay watershed, and (c) providing a foundation for establishing market-based incentives to help achieve the Chesapeake Bay Program's nonpoint source reduction goals.

§ 62.1-44.19:13. Definitions.

As used in this article, unless the context requires a different meaning:

"Annual mass load of total nitrogen" (expressed in pounds per year) means the daily total nitrogen concentration (expressed as mg/L to the nearest 0.01 mg/L) multiplied by the flow volume of effluent discharged during the 24-hour period (expressed as MGD to the nearest 0.01 MGD), multiplied by 8.34 and rounded to the nearest whole number to convert to pounds per day (lbs/day) units, then totaled for the calendar month to convert to pounds per month (lbs/mo) units, and then totaled for the calendar year to convert to pounds per year (lbs/yr) units.

"Annual mass load of total phosphorus" (expressed in pounds per year) means the daily total phosphorus concentration (expressed as mg/L to the nearest 0.01mg/L) multiplied by the flow volume of effluent discharged during the 24-hour period (expressed as MGD to the nearest 0.01 MGD) multiplied by 8.34 and rounded to the nearest whole number to convert to pounds per day (lbs/day) units, then totaled for the calendar month to convert to pounds per month (lbs/mo) units, and then totaled for the calendar year to convert to pounds per year (lbs/yr) units.

"Association" means the Virginia Nutrient Credit Exchange Association authorized by this article.

"Attenuation" means the rate at which nutrients are reduced through natural processes during transport in water.

"Biological nutrient removal technology" means (i) technology that will achieve an annual average total nitrogen effluent concentration of eight milligrams per liter and an annual average total phosphorus effluent concentration of one milligram per liter, or (ii) equivalent reductions in loads of total nitrogen and total phosphorus through the recycle or reuse of wastewater as determined by the Department.

"Delivered total nitrogen load" means the discharged mass load of total nitrogen from a point source that is adjusted by the delivery factor for that point source.

"Delivered total phosphorus load" means the discharged mass load of total phosphorus from a point source that is adjusted by the delivery factor for that point source.

"Delivery factor" means an estimate of the number of pounds of total nitrogen or total phosphorus delivered to tidal waters for every pound discharged from a permitted facility, as determined by the specific geographic location of the permitted facility, to account for attenuation that occurs during riverine transport between the permitted facility and tidal waters. Delivery factors shall be calculated using the Chesapeake Bay Program watershed model.

"Department" means the Department of Environmental Quality.

"Equivalent load" means 2,300 pounds per year of total nitrogen and 300 pounds per year of total

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60 phosphorus at a flow volume of 40,000 gallons per day; 5,700 pounds per year of total nitrogen and
61 760 pounds per year of total phosphorus at a flow volume of 100,000 gallons per day; and 28,500
62 pounds per year of total nitrogen and 3,800 pounds per year of total phosphorus at a flow volume of
63 500,000 gallons per day.

64 "Facility" means a point source discharging or proposing to discharge total nitrogen or total
65 phosphorus to the Chesapeake Bay or its tributaries. This term does not include confined animal feeding
66 operations, discharges of stormwater, return flows from irrigated agriculture, or vessels.

67 "General permit" means the general permit authorized by this article.

68 "Permitted facility" means a facility authorized by the general permit to discharge total nitrogen or
69 total phosphorus. For the sole purpose of generating point source nitrogen credits or point source
70 phosphorus credits, "permitted facility" shall also mean the Blue Plains wastewater treatment facility
71 operated by the District of Columbia Water and Sewer Authority.

72 "Permittee" means a person authorized by the general permit to discharge total nitrogen or total
73 phosphorus.

74 "Point source nitrogen credit" means the difference between (i) the waste load allocation for a
75 permitted facility specified as an annual mass load of total nitrogen, and (ii) the monitored annual mass
76 load of total nitrogen discharged by that facility, where clause (ii) is less than clause (i), and where the
77 difference is adjusted by the applicable delivery factor and expressed as pounds per year of delivered
78 total nitrogen load.

79 "Point source phosphorus credit" means the difference between (i) the waste load allocation for a
80 permitted facility specified as an annual mass load of total phosphorus, and (ii) the monitored annual
81 mass load of total phosphorus discharged by that facility, where clause (ii) is less than clause (i), and
82 where the difference is adjusted by the applicable delivery factor and expressed as pounds per year of
83 delivered total phosphorus load.

84 "State-of-the-art nutrient removal technology" means (i) technology that will achieve an annual
85 average total nitrogen effluent concentration of three milligrams per liter and an annual average total
86 phosphorus effluent concentration of 0.3 milligrams per liter, or (ii) equivalent load reductions in total
87 nitrogen and total phosphorus through recycle or reuse of wastewater as determined by the Department.

88 "Tributaries" means those river basins for which separate tributary strategies were prepared
89 pursuant to § 2.2-218 and includes the Potomac, Rappahannock, York, and James River Basins, and the
90 Eastern Coastal Basin, which encompasses the creeks and rivers of the Eastern Shore of Virginia that
91 are west of Route 13 and drain into the Chesapeake Bay.

92 "Waste load allocation" means (i) the water quality-based annual mass load of total nitrogen or
93 annual mass load of total phosphorus allocated to individual facilities pursuant to the Water Quality
94 Management Planning Regulation (9 VAC 25-720) or its successor, (ii) the water quality-based annual
95 mass load of total nitrogen or annual mass load of total phosphorus acquired pursuant to
96 § 62.1-44.19:15 for new or expanded facilities, or (iii) applicable total nitrogen or total phosphorus
97 total maximum daily loads to restore or protect the water quality and beneficial uses of the Chesapeake
98 Bay or its tidal tributaries.

99 § 62.1-44.19:14. Watershed general permit for nutrients.

100 A. By January 1, 2006, or as soon thereafter as possible, the Board shall issue a Watershed General
101 Virginia Pollutant Discharge Elimination System Permit, hereafter referred to as the general permit,
102 authorizing point source discharges of total nitrogen and total phosphorus to the waters of the
103 Chesapeake Bay and its tributaries. Except as otherwise provided in this article, the general permit shall
104 control in lieu of technology-based, water quality-based, and best professional judgment, interim or final
105 effluent limitations for total nitrogen and total phosphorus in individual Virginia Pollutant Discharge
106 Elimination System permits for facilities covered by the general permit where the effluent limitations for
107 total nitrogen and total phosphorus in the individual permits are based upon standards, criteria, waste
108 load allocations, policy, or guidance established to restore or protect the water quality and beneficial
109 uses of the Chesapeake Bay or its tidal tributaries.

110 B. This section shall not be construed to limit or otherwise affect the Board's authority to establish
111 and enforce more stringent water quality-based effluent limitations for total nitrogen or total phosphorus
112 in individual permits where those limitations are necessary to protect local water quality. The exchange
113 or acquisition of credits pursuant to this article shall not affect any requirement to comply with such
114 local water quality-based limitations.

115 C. The general permit shall contain the following:

116 1. Waste load allocations for total nitrogen and total phosphorus for each permitted facility
117 expressed as annual mass loads. The allocations for each permitted facility shall reflect the applicable
118 individual water quality-based total nitrogen and total phosphorus waste load allocations. An owner or
119 operator of two or more facilities located in the same tributary may apply for and receive an
120 aggregated waste load allocation for total nitrogen and an aggregated waste load allocation for total
121 phosphorus for multiple facilities reflecting the total of the water quality-based total nitrogen and total

phosphorus waste load allocations established for such facilities individually;

2. A schedule requiring compliance with the combined waste load allocations for each tributary as soon as possible taking into account (i) opportunities to minimize costs to the public or facility owners by phasing in the implementation of multiple projects; (ii) the availability of required services and skilled labor; (iii) the availability of funding from the Virginia Water Quality Improvement Fund as established in § 10.1-2128, the Virginia Water Facilities Revolving Fund as established in § 62.1-225, and other financing mechanisms; (iv) water quality conditions; and (v) other relevant factors. Following receipt of the compliance plans required by subdivision C 3, the Board shall re-evaluate the schedule taking into account the information in the compliance plans and the factors in this subdivision, and may modify the schedule as appropriate;

3. A requirement that within nine months after the initial effective date of the general permit, the permittees shall either individually or through the Association submit compliance plans to the Department for approval. The compliance plans shall contain, at a minimum, any capital projects and implementation schedules needed to achieve total nitrogen and phosphorus reductions sufficient to comply with the individual and combined waste load allocations of all the permittees in the tributary. The compliance plans may rely on the exchange of point source credits in accordance with this article, but not the acquisition of credits through payments authorized by § 62.1-44.19:18, to achieve compliance with the individual and combined waste load allocations in each tributary. The compliance plans shall be updated annually and submitted to the Department no later than February 1 of each year;

4. Such monitoring and reporting requirements as the Board deems necessary to carry out the provisions of this article;

5. A procedure that requires every owner or operator of a facility authorized by a Virginia Pollutant Elimination System permit to discharge 100,000 gallons or more per day, or an equivalent load, directly into tidal waters, or 500,000 gallons or more per day, or an equivalent load, directly into nontidal waters, to secure general permit coverage by filing a registration statement with the Department within a specified period after each effective date of the general permit. The procedure shall also require any owner or operator of a facility authorized by a Virginia Pollutant Discharge Elimination System permit to discharge 40,000 gallons or more per day, or an equivalent load, directly into tidal or nontidal waters to secure general permit coverage by filing a registration statement with the Department at the time he makes application with the Department for a new discharge or expansion that is subject to an offset or technology-based requirement in § 62.1-44.19:15, and thereafter within a specified period of time after each effective date of the general permit. The general permit shall provide that any facility authorized by a Virginia Pollutant Discharge Elimination System permit and not required by this subdivision to file a registration statement shall be deemed to be covered under the general permit at the time it is issued, and shall file a registration statement with the Department when required by this section. Owner or operators of facilities that are deemed to be permitted under this section shall have no other obligation under the general permit prior to filing a registration statement in securing coverage under the general permit based upon such registration statement;

6. A procedure for efficiently modifying the lists of facilities covered by the general permit where the modification does not change or otherwise alter any waste load allocation or delivery factor adopted pursuant to the Water Quality Management Planning Regulation (9 VAC 25-270) or its successor, or an applicable total maximum daily load. The procedure shall also provide for modifying or incorporating new waste load allocations or delivery factors, including the opportunity for public notice and comment on such modifications or incorporations; and

7. Such other conditions as the Board deems necessary to carry out the provisions of this chapter and Section 402 of the federal Clean Water Act (33 U.S.C. § 1342).

D. The Board shall maintain and make available to the public a current listing, by tributary, of all permittees and permitted facilities under the general permit, together with each permitted facility's total nitrogen and total phosphorus waste load allocations, and total nitrogen and total phosphorus delivery factors.

E. Except as otherwise provided in this article, in the event that there are conflicting or duplicative conditions contained in the general permit and an individual Virginia Pollutant Discharge Elimination System permit, the conditions in the general permit shall control.

§ 62.1-44.19:15. New or expanded facilities.

A. An owner or operator of a new or expanded facility shall comply with the applicable requirements of this section as a condition of the facility's coverage under the general permit.

1. An owner or operator of a facility authorized by a Virginia Pollutant Discharge Elimination System permit first issued before July 1, 2005, that expands his facility to discharge 100,000 gallons or more per day, or an equivalent load directly into tidal waters, or 500,000 gallons or more per day, or an equivalent load, directly into nontidal waters shall demonstrate to the Department that he has

183 acquired waste load allocations sufficient to offset any increase in his delivered total nitrogen and
184 delivered total phosphorus loads resulting from any expansion beyond his waste load allocations or
185 permitted design capacity as of July 1, 2005, and will install state-of-the-art nutrient removal technology
186 at the time of the expansion.

187 2. An owner or operator of a facility authorized by a Virginia Pollutant Discharge Elimination
188 System permit first issued before July 1, 2005, that expands his facility to discharge 100,000 gallons or
189 more per day up to and including 499,999 gallons per day, or an equivalent load, directly into nontidal
190 waters, shall demonstrate to the Department that he has acquired waste load allocations sufficient to
191 offset any increase in his delivered total nitrogen and delivered total phosphorus loads resulting from
192 any expansion beyond his permitted capacity as of July 1, 2005, and will install at a minimum,
193 biological nutrient removal technology at the time of the expansion.

194 3. An owner or operator of a facility authorized by a Virginia Pollutant Discharge Elimination
195 System permit first issued before July 1, 2005, that expands his facility to discharge 40,000 gallons or
196 more per day up to and including 99,999 gallons per day, or an equivalent load directly into tidal or
197 nontidal waters, shall demonstrate to the Department that he has acquired waste load allocations
198 sufficient to offset any increase in his delivered total nitrogen and delivered total phosphorus loads
199 resulting from any expansion beyond his permitted capacity as of July 1, 2005.

200 4. An owner or operator of a facility authorized by a Virginia Pollutant Discharge Elimination
201 System permit first issued on or after July 1, 2005, to discharge 40,000 gallons or more per day, or an
202 equivalent load, shall demonstrate to the Department that he has acquired waste load allocations
203 sufficient to offset his delivered total nitrogen and delivered total phosphorus loads, and will install (i)
204 at a minimum, biological nutrient removal technology at any facility authorized to discharge up to and
205 including 99,999 gallons per day, or an equivalent load, directly into tidal and nontidal waters, or up to
206 and including 499,999 gallons per day, or an equivalent load, to nontidal waters; and (ii)
207 state-of-the-art nutrient removal technology at any facility authorized to discharge 100,000 gallons or
208 more per day, or an equivalent load, directly into tidal waters, or 500,000 gallons or more per day, or
209 an equivalent load, directly into nontidal waters.

210 B. Waste load allocations required by this section to offset new or increased delivered total nitrogen
211 and delivered total phosphorus loads shall be acquired in accordance with this subsection.

212 1. Such allocations may be acquired from one or a combination of the following:

213 a. Acquisition of all or a portion of the waste load allocations from one or more point source
214 dischargers in the same tributary;

215 b. Acquisition of nonpoint source load allocations through the use of best management practices
216 acquired through a public or private entity acting on behalf of the land owner. Such best management
217 practices shall achieve reductions beyond those already required by or funded under federal or state
218 law, or the Virginia tributaries strategies plans, and shall be installed in the same tributary in which the
219 new or expanded facility is located and included as conditions of the facility's individual Virginia
220 Pollutant Discharge Elimination System permit; or

221 c. Acquisition of allocations in accordance with the terms of the general permit or through such
222 other means as may be approved by the Department on a case-by-case basis.

223 2. The Board shall give priority to allocations acquired in accordance with subdivisions B 1 a and B
224 1 b. The Board shall approve allocations acquired in accordance with subdivision B 1 c only after the
225 owner or operator has demonstrated that he has made a good faith effort to acquire sufficient
226 allocations in accordance with subdivisions B 1 a and B 1 b and that such allocations are not
227 reasonably available taking into account timing, cost, and other relevant factors.

228 C. Until such time as the Board finds that no allocations are reasonably available in an individual
229 tributary, the general permit shall provide for the acquisition of allocations through payments into the
230 Virginia Water Quality Improvement Fund established in § 10.1-2128. Such payments shall be promptly
231 applied to achieve equivalent point or nonpoint source reductions in the same tributary beyond those
232 reductions already required by or funded under federal or state law or the Virginia tributaries strategies
233 plans. The general permit shall base the cost of each pound of allocation on (i) the estimated cost of
234 achieving a reduction of one pound of nitrogen or phosphorus at the facility that is securing the
235 allocation, or comparable facility, for each pound of allocation acquired; or (ii) the average cost of
236 reducing two pounds of nitrogen or phosphorus from nonpoint sources in the same tributary for each
237 pound of allocation acquired, whichever is higher. Upon each reissuance of the general permit, the
238 Board may adjust the cost of each pound of allocation based on current costs and cost estimates.

239 § 62.1-44.19:16. Technology-based standards and effluent limitations.

240 A. The Board may establish a technology-based standard less stringent than the applicable standard
241 specified in § 62.1-44.19:15 based on a demonstration by an owner or operator that the specified
242 standard is not technically or economically feasible for the affected facility or that the technology-based
243 standard would require the owner or operator to construct treatment facilities not otherwise necessary
244 to comply with his waste load allocation without reliance on nutrient credit exchanges pursuant to

§ 62.1-44.19:18.

B. The Board may include technology-based effluent concentration limitations in the individual permit for any facility that has installed technology for the control of nitrogen and phosphorus whether by new construction, expansion, or upgrade. Such limitations shall be based upon the technology installed by the facility and shall be expressed as annual average limitations. Such limitations shall not affect the generation, acquisition, or exchange of allocations or credits pursuant to this article.

§ 62.1-44.19:17. Virginia Nutrient Credit Exchange Association authorized; duties; composition; appointment; terms.

A. The permittees under the general permit may establish a nonstock corporation under Chapter 10 (§ 13.1-801 et seq.) of Title 13.1, to be known as the Virginia Nutrient Credit Exchange Association, to coordinate and facilitate participation in the nutrient credit exchange program by its members. The Virginia Nutrient Credit Exchange Association, which is hereafter referred to as the Association, may (i) submit on behalf of the permittees the compliance plans required by § 62.1-44.19:14, (ii) develop a standard form of agreement for use by permittees when buying and selling nitrogen and phosphorus allocations and credits, (iii) assist permittees in identifying buyers and sellers of nitrogen and phosphorus allocations and credits, (iv) coordinate planning to ensure that to the extent possible, sufficient credits are available each year to achieve full compliance with the general permit, (v) assist individual municipal permittees in utilizing public-private partnerships and other innovative measures to achieve the Commonwealth's water quality goals, and (vi) perform such other duties and functions as may be necessary to the effective and efficient implementation of the credit exchange program. The Association shall not assume any of the permittees' compliance obligations under the general permit.

B. Only permittees under the general permit may become members of the Association. The Association shall operate through a board of directors, which shall consist of 10 members and be representative of the membership in the Association. Association board members shall be employees of Association members, shall be elected by the Association membership at the beginning of each term of the general permit, and shall serve through the end of the permit term to which they were elected. Vacancies for unexpired Association board terms shall be filled in the same manner in which members are originally elected to the Association board.

C. The Association board shall elect a president, vice-president, secretary, and treasurer from among its members at the beginning of each permit term. Officers and Association board members shall receive no compensation for their services as officers and board members of the Association.

§ 62.1-44.19:18. Nutrient Allocation Compliance and Reporting.

A. Each permitted facility shall be in compliance with its individual waste load allocations if: (i) its annual mass load is less than the applicable waste load allocation assigned to the facility in the general permit or acquired by the facility pursuant to subsection B of § 62.1-44.19:15; (ii) the permitted facility acquires sufficient point source nitrogen or phosphorus credits in accordance with subdivision A 1; or (iii) in the event it is unable to meet the individual waste load allocation pursuant to clauses (i) or (ii), the permitted facility acquires sufficient nitrogen or phosphorus credits through payments made in accordance with subdivision A 2; provided, however, that the acquisition of nitrogen or phosphorus credits pursuant to this section shall not alter or otherwise affect the individual waste load allocations for each permitted facility.

1. A permittee may acquire point source nitrogen or phosphorus credits from one or more facilities only if (i) the credits are generated and applied to a compliance obligation in the same calendar year, (ii) the credits are generated by one or more permitted facilities in the same tributary, (iii) the credits are acquired no later than June 1 immediately following the calendar year in which the credits are applied, and (iv) no later than June 1 immediately following the calendar year in which the credits are applied, the permittee certifies on a form supplied by the Department that he has acquired sufficient credits to satisfy his compliance obligations.

2. A permittee may acquire point source nitrogen or phosphorus credits through payments made into the Virginia Water Quality Improvement Fund established in § 10.1-2128 only if, no later than June 1 immediately following the calendar year in which the credits are applied, the permittee certifies on a form supplied by the Department that he has diligently sought, but has been unable to acquire, sufficient credits to satisfy his compliance obligations through the acquisition of point source nitrogen or phosphorus credits with other permitted facilities in the same tributary, and that he has acquired sufficient credits to satisfy his compliance obligations through one or more payments in accordance with the terms of the general permit.

B. Until such time as the Board finds that no credits are reasonably available in an individual tributary, the general permit shall provide for the acquisition of nitrogen and phosphorus credits through payments into the Virginia Water Quality Improvement Fund in accordance with subdivision A 2. Such payments shall be promptly applied to achieve equivalent point or nonpoint source reductions in the same tributary beyond those reductions already required by or funded under federal or state law, or

the Virginia tributaries strategies plans. The general permit shall base the cost of each nitrogen or phosphorus credit on the average cost of reducing one pound of nitrogen or phosphorus from Virginia publicly owned wastewater treatment facilities for each credit acquired. Upon each reissuance of the general permit, the Board may adjust the cost of each nitrogen and phosphorus credit based on (i) the current average cost of reducing a pound of nitrogen or phosphorus from Virginia publicly owned wastewater treatment facilities for each credit acquired and (ii) any additional incentives reasonably necessary to ensure that there is timely and continuing progress toward attaining and maintaining each tributary's combined waste load allocation.

C. On or before February 1, annually, each permittee shall either individually or through the Association file a report with the Department. The report shall identify (i) the annual mass load of total nitrogen and the annual mass load of total phosphorus discharged by each permitted facility during the previous calendar year, (ii) the delivered total nitrogen load and delivered total phosphorus load discharged by each permitted facility during the previous year, and (iii) the number of total nitrogen and total phosphorus credits for the previous calendar year to be purchased or sold by the permittee. The report shall contain the certification required by federal and state law and be signed by each permittee for each of the permittee's facilities covered by the general permit.

D. On or before April 1, annually, the Department shall prepare a report containing the annual mass load of total nitrogen and annual mass load of total phosphorus discharged by each permitted facility, the number of point source nitrogen and phosphorus credits for the previous calendar year for sale or purchase by each such facility, and to the extent there are insufficient point source credits available for exchange to provide for full compliance by every permittee, the number of credits to be purchased pursuant to this section. Upon completion of the report, the Department shall promptly publish notice of the report and make the report available to any person requesting it.

E. On or before July 1, annually, the Department shall publish notice of all nitrogen and phosphorus credit exchanges and purchases for the previous calendar year and make all documents relating to the exchanges and purchases available to any person requesting them.

§ 62.1-44.19:19. Program audits.

In addition to its permit compliance and enforcement authority, the Department is authorized to conduct such audits of the Association and permittees as it deems necessary to ensure that the reports and data received from permittees and the Association are complete and accurate. The Association and permittees under the general permit shall cooperate with the Department in the conduct of such audits and provide the Department with such information as the Department may require to fulfill its responsibilities under this article.

2. That any rights, claims, or defenses arising out of the general permit authorized under this act or arising out of Article 3.04 (§ 62.1-44.19:12 et seq.) of Chapter 3.1 of Title 62.1 of this act shall not be applicable to, raised nor asserted in any judicial proceeding, or appeals therefrom, that relate to Virginia Pollutant Discharge Elimination System permits issued by the Board on June 17, 2004.